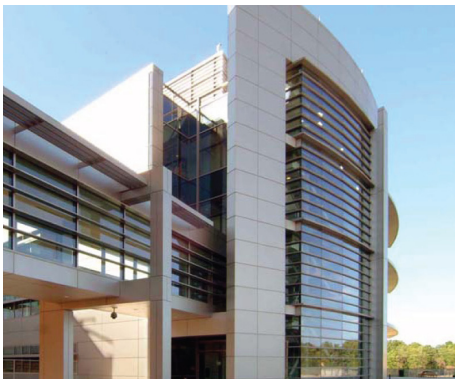
GSA Office of Governmentwide Policy



2013 GSA Achievement Award for Real Property Innovation

Office of Real Property Management • October 2013

Contents


GENERAL SERVICES
ADMINISTRATION

Introduction

The GSA Achievement Award for Real Property Innovation publication is made possible through the collaborative efforts of the U.S. General Services Administration's (GSA), and the Federal agencies that participated in the 2013 GSA Achievement Award for Real Property Innovation Program. The publication highlights and recognizes innovative projects in Federal asset management, sustainability, workplace innovation and best adopted practices.

This is an annual publication of GSA's Office of Governmentwide Policy's (OGP), Office of Real Property Management in Washington, DC. The publication is produced by the Office of Asset and Transportaion Management led by Principal Deputy Carolyn Austin-Diggs.

For information about the GSA Achievement Award for Real Property Innovation, please contact Patrice Walker, Program Manager, at 202-208-7639 or **patrice.walker@gsa.gov** or visit **www.gsa.gov/realpropertyaward**.

For more information about the Office of Real Property Management and its innovative real estate and workplace initiatives, visit **www.gsa.gov/realpropertypolicy.**

Asset Management

This award recognizes exemplary initiatives, innovations and projects in Asset Management and communicates these cutting-edge ideas to agencies striving to improve their real property management. Achievements are related to asset management planning, inventory management, performance management, utilization and disposal of real property, transportation and infrastructure improvement and portfolio optimization.

Winner

General Services Administration, Public Buildings Service, Mid-Atlantic Region

Mid-Atlantic Region BA63 Energy Rebate Program Development and Implementation

Federal agencies are constantly being directed to do more with less. Nowhere is this seen more than GSA's technical study and capital reinvestment allowances allocated across GSA's eleven regions each fiscal year. These funds, used to award studies, designs and construction projects to support and maintain GSA's portfolio of owned inventory, have diminished over the past several years. The impact of reduced funding forces asset teams to make challenging capital reinvestment priorities and sometimes delay construction projects to future fiscal years. Despite diminished funding, the agency still has crucially important and challenging energy, water, and greenhouse gas reduction goals to meet associated with policies

including: GSA's Strategic Sustainability Performance Plan, and Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance.

Advancing our energy and water conservation efforts, given the strained reinvestment means to financially support efficiency projects, compelled the GSA PBS Mid-Atlantic Region to explore alternative funding avenues. In January 2011, the region embarked on a pilot project, and then formally developed a region-wide program to identify alternative funding sources inherent to Budget Activity (BA) 63, capture funds, and develop and implement processes to identify and award new energy and water savings projects from the new revenue stream.

Over the past two years, the Mid-Atlantic Region investigated several alternative funding sources including: energy rebates for GSA-funded projects in GSA-owned properties, demand response programs and selling of solar renewable energy certificates (SREC) from photovoltaic installations located on GSA-owned buildings. These sources, along with an team-derived holistic approach to project evaluation and mapping funds to projects using asset management principles, has led to this program's success.

This new program, created by the GSA PBS Mid-Atlantic Region BA63 Energy Program Team, has already realized significant savings.

Since inception, the GSA Mid-Atlantic Region's BA63 Energy Program:

- Captured $1,020,580 to date through utility rebates, demand response programs, and SREC sales
- Executed 19 energy and water conservation projects, totaling $978,640, with an aggregate simple payback of 12 years
- Projecting to generate approximately $400,000 of additional revenues in fiscal year 2014 for continued funding of sustainable projects

Asset Management
Recognized Entries

Honorable Mention

United States Air Force

Destin West Resort Enhanced Use Lease (EUL) Project

The 'Holiday Inn' Destin West Resort Enhanced Use Lease (EUL) project is submitted on behalf of the United States Air Force for consideration in the 17th Annual General Services Administration (GSA) Achievement Award for Real Property Innovation, Asset Management category. The Destin West Resort is an innovative project which highlights asset management in the areas of real property utilization, infrastructure improvement, and portfolio optimization. This project served as a catalyst for innovation in the management of Air Force real property assets.

The Destin West Resort EUL blazed the trail for the development and implementation of the Air Force's EUL program, creating innovative paths that leverage Air Force assets, generate a return to the Air Force, and enhance mission. Generating $11.2 million (or more) of Net Present Value, the project provides an alternate revenue stream to offset constrained fiscal budgets. The following narrative identifies how the Destin West Resort EUL excels in the areas of originality and innovation, return to the government, and effectiveness and replicability.

Special Achievement

General Services Administration, Federal Acquisition Service

Preparing for a Wicked Future: Adapting to Climate Change

Superstorm Sandy, persistent drought conditions covering more than half of the United States, extended heat waves, and projections for more of the same through the end of the century. Climate change will impact organizations around the globe, and those that prepare today will be ready to swiftly navigate the challenges ahead. The U.S. General Services

Administration (GSA) recognizes the need to prepare today so it can maintain its mission and support its customers well into the future. To this end, GSA's Public Building Service (PBS) and Federal Acquisition Services (FAS) teamed with several federal partners in January 2013 to conduct "threshing sessions" that build capacity, capability, and confidence within the federal government to address incremental climate risks. The sessions were held in two regions: the National Capital Region (Region 11) and the Heartland Region (Region 6).

The threshing sessions were designed to help the participants meet the requirements of Section 8(i) of Executive Order (EO) 13514, which requires federal agencies to evaluate climate change risks and vulnerabilities and to manage the effects of climate change on agency operations in the short and long term. Climate change adaptation is the process of adjusting to a new or changing environment that exploits beneficial opportunities or moderates negative effects. It is an emergent and complex wicked problem1 set that requires PBS and FAS to develop innovative integrated service offerings that are tailored to support mission continuity for each federal customer.

1 A "wicked problem"

Just as a farmer threshes through the inedible chaff to harvest the valuable edible grain, the two threshing sessions brought together a set of federal stakeholders to sift through a myriad of information on mission critical assets and climate projections to get to the golden nuggets of how to address climate risks. Participants in each region focused on one customer and evaluated a select set of climate risks to two of the customer's mission critical assets: a facility and the information technology and telecommunication services that support the facility. The sessions leveraged the combined capabilities of PBS, FAS, and the participating agencies. Several science agencies participated and provided climate projection information.

The outcomes from both threshing sessions included a list of climate risks to the assets, strategies to address the risks, and the identification of partners and funding needed to effectively mitigate the risks, all of which will assist GSA and its customers in meeting their EO 13514 climate change adaptation goals.

Today, the regional threshing session teams continue to move forward with the outcomes from the session to create a climate change preparation and adaptation plan not only to address the assets examined in the sessions, but to also inform priorities in PBS and FAS business delivery cycles. This risk management approach is adaptable, repeatable, scalable, and necessary for GSA to build the capacity to manage climate change risks across the enterprise.

Department of State

Department of State Reduced Reliance on Private Leases

In June 2011, the Department of State (State) was presented with a relatively unique

opportunity: the owner of one of its key real estate assets, a fully secured warehouse, was interested in selling the property. State had the chance to save millions of dollars and transfer ownership and full control of a high-priority, high-security asset to federal, rather than private, hands. The only complication was that the owner had a time limit. The entire $10 million purchase had to be completed, start to finish, in six months.

State had been looking for opportunities to increase its occupancy of federally owned buildings and reducing its reliance on private leases. Repeated studies and evaluations had shown this to be the more fiscally responsible option, but opportunities were scarce. However, beginning in 2011; State, with GSA, has been able to acquire two commercial properties, one federal property, and renovate another federal building. These projects combined have resulted in State's domestic real estate portfolio now having a greater than 50 percent occupancy of Federal space versus commercial leases. These acquisitions are resulting in the cost avoidance of millions of taxpayer dollars, increasing the safety and security of employees, and keeping State, with the able assistance of GSA, at the forefront of federal real estate asset management activities.

The property offered to State for sale in June 2011 was a building with a long and complex history. State has housed its Diplomatic Pouch and Mail transshipment facility at this warehouse in Sterling, Virginia since 1989. The asset supports the conduct of US foreign policy activities worldwide and is critical to State's mission performance and the success of over 25, 000 non-State customers from more than two dozen other federal Departments and Agencies.

In November 2001 anthrax contamination was confirmed by the Centers for Disease Control and Prevention (CDC). State worked closely with the CDC, the Federal Bureau of Investigation, and the United States Postal Service to examine all of the mail in the building and to ensure the safety of its staff. Subsequently State invested approximately $20M to replace the building's heating, ventilation and mechanical systems and install highly specialized security screening and testing equipment in this facility for the detection of explosive, chemical, biological and other hazards.

Because of State's long term need for this facility, as well as the extensive improvements to the equipment and the building itself, it was apparent to State and GSA that purchase was in the long term best interests of the taxpayer. Furthermore, when the opportunity to purchase arose, the government lease still had nine years remaining, at an average annual rent of approximately $1M. Thus the break-even point of this purchase was fewer than ten years. Extensive coordination and cooperation between State, GSA, the Congressional appropriations committees, and the Department of Justice was necessary to facilitate a purchase

with so little time. This success and the money saved have demonstrated the effectiveness of converting commercial leases to federally-owned buildings and begun the restructuring of State's portfolio and its efforts to reduce its reliance on costly private leases.

Federal Drug Administration, Health & Human Services

Asset Management

There was a real need to create current Building Signage for all Rooms including Offices, Labs, Storage, etc., at the FDA's Jefferson Laboratories. The Building Signage throughout the campus lacked key information such as the name of the Division, person or person(s) who use the room and their contact information. Professional Companies quoted prices in the neighborhood of $300,000 to $400,000 to provide complete and up-to-date signage.
The Jefferson Labs Complex Staff (JLCS) division created a database application to populate and print-out the Building Signage for the whole campus. The approach was inexpensive and yet produced a thorough method for determining actual laboratory and office usage. Results:

1. New door signage for every office and laboratory on campus.
2. Visibility of the door signage promotes accurate and current information.
3. The dynamic database is updated locally by the division administrator and stored centrally on an Access Database.
4. Reports provide a complete listing of where people sit and where they work. Labs are often occupied by multiple researchers.
5. Provides useful information for decision makers with regards to space planning and efficient space use.

National Capital Region, Public Buildings Service

Power Shaver Energy Saving System

As part of its ongoing effort to improve plant operation efficiencies and reduce costs, HOTD has pursued several projects aimed at improving the methodology of operations. One in particular involves the Power Shaver Energy Saving System.

The Power Shaver Energy Saving System allows HOTD to provide substantial reductions in power usage with a verifiable reduction of electric utility bill costs. This innovative technology will also help protect equipment against damage from surges, sags, and phasing, and it is a maintenance-free solution with an expected life of approximately 20 years. Additionally, equipment life is increased while maintenance and downtime are reduced, and the system is compatible with any control system.

Expected benefits in terms of potential cost savings and energy savings are predicted to be substantial: 650,000 to 800,000 kilowatt hours

(kWh) annual energy savings for round-the-clock use of sixteen 480V units, with a value of $71,500 to $88,000 annual cost savings based on $0.11 per kWh rate. This is equivalent to13 million to 16 million kWh cumulative energy savings over 20 years, for cumulative cost savings of $1.43 million to $1.76 million, or even more considering anticipated future power cost increases.

HOTD provides steam heating and chilled water cooling to approximately 80 federal and quasi-federal buildings in the heart of Washington, DC, totaling approximately 70 million square feet of space, and also provides chilled water for cooling to eleven of these buildings located on and adjacent to the National Mall. While providing these services, HOTD operates efficiently, and its team members are always working toward minimizing the use of energy resources for maximum results.

General Services Administration, Public Buildings Service

Heartland PBS Regional Portfolio Plan

The Heartland Region's approach to asset management has become more strategic because of the recently created Regional Portfolio Plan. The plan identifies regional investment priorities and addresses real estate market dynamics, customer considerations, environmental sustainability, high-performing workplace strategies and more. The RPP identifies whether Region 6 has a healthy, economically sustainable portfolio; projects the status for the next five years; and provides a regional roadmap of strategies to maintain a healthy portfolio. It aligns regional asset management strategies with national directives and executive orders. The goal is to produce and follow a strategy that is best for the entire region, versus a narrow territorial focus, and to foster informed decision making and portfolio optimization.

The plan improves the condition of R6 real property assets, in that the region invests its limited capital funding on projects that will reduce vacant space, improve building or space utilization, reduce building deficiencies, promote life safety, reduce energy consumption or promote environmental sustainability. Strategically focusing investments in these areas improves the quality of Heartland federal real property. The RPP also helps to identify which assets should be considered for disposal.

As a result of the RPP, R6 has been more successful at responding to investment calls, using the planning information instead of scrambling to come up with information that may or may not be the most relevant. Additionally, the RPP easily could be replicated by other PBS regions and agencies outside GSA and within Region 6, asset managers started creating Local Portfolio Plans to drive strategic decision-making down to the territory level.

The Heartland's Regional Portfolio Plan has truly become one of regional management's most important decision-making guides.

Department of State, Office of Strategic Planning for Real Estate

Real Property Application Redesign

The Real Property Application (RPA) is the Department of State's officially approved Real Property Management Tool. It has been designed to meet the requirements of Executive Order 13327, and provides a single standard automated information system to track and manage the Department's overseas real estate assets, including more than 20,000 constructed assets totaling 77 million gross square feet of building area and valued at over $53 billion. The Department is currently undertaking a redesign of the RPA application which will provide users with enhanced capabilities to manage the Department's real property assets.

United States Air Force

554 RED HORSE Squadron Materiel Control Section

The 554 RED HORSE Squadron nominates its Materiel Management Section for their outstanding achievements in Asset Management from September 1, 2012 thru May 31, 2013. During this period the men and women of the Materiel Management Section deployed to the Central Command Area of Responsibility as the lead unit of a combined 250 person Engineering team. This represented the first lead unit deployment for the 554 RED HORSE Squadron since Vietnam and merged 8 separate units across the Air Force to form a single deployed team. Upon arrival in the combat zone, this 9 person logistics team had to quickly asses the current operations, build a management strategy and begin supporting logistical requirements to prevent delays to on-going construction theater wide. Despite countless challenges such as shipping limitations due to the high demand for military transport aircraft and customs difficulties in 3 different middle eastern countries, they continued to excel and create asset management solutions to support 32 million dollars in troop labor construction. Additionally, they were able to streamline management of the Air Forces largest unit fleet of vehicles and equipment totaling 612 assets, assuring proper disposition to support operations throughout 9 locations including 4 combat zone sites in Afghanistan. Finally, the team continued their superior asset management functions while at home station on Guam to support construction operations for a 251 million dollar Pacific Air Force's Regional Training Center program despite being understaffed due to the deployment. This team not only represents a highly skilled and innovative team of Airmen but a group of individuals who overcame extreme challenges to maintain the mission and operations world-wide through creative solutions and process improvements

United States Air Force

CES/LRS Consolidation Project

The inspiration to consolidate the Civil Engi neer and Logistics Readiness Squadrons was

borne of a need to reduce Barksdale's Real Property footprint during a period of reduced funding while making more efficient use of a 60 plus yea r old building. Real Property Specialists, Community Planners, Leadership from both squadrons and functional managers joined in planning and programming this successful effort the results of which are truly amazing.

The three plus year long project will reduce Barksdale's Real Property footprint by over 208,000 square feet, eliminate 22 old outdated bu ildings, place the vital Civil Engineer Squadron in the heart of its area of responsibility, centrall y l ocate numerous Logistics Readiness Squadron functions, and save $800,000 per year in maintenance costs and im prove mi ssion effectiveness by expanding the flightli ne aircraft parts store. These tasks will be accomplished with no new Military Construction (M I LCON) Projects and wi ll eliminate the need for over $20,000,000 in previously identified MI LCON requirements. In addition to the major benefits the entire project is being phased to insure no reduction in mi ssion readiness or services provided to members during renovations.

Since the begilming of planning this project several personnel have rotated in and out of the two squadrons, but the program 's goal has taken on a l i fe of its own, inspiring new members to make improvements whi le becoming a source of pride to those who remain. The conviction that the projects ultimate goals wi ll make Barksdale a better place to work and live have resulted in improvement ideas from military and civilian employees at every level. Additionally, the fact that it was concei ved, program med, and is being executed by us and for us is an add itional inspiration.

National Aeronautics and Space Administration

Space Utilization Optimization Model

Space allocation planning is a complex problem involving the allocation of limited resources to meet business goals, reduce operating costs, and promote an effective and productive workplace. This model is part of an integrated Geospatial Information System (GIS) and a decision support system initially implemented at the NASA Langley Research Center, and subsequently at other NASA, USAF and US Navy locations.

One of the difficulties with space planning in the context of a large organization is how to get the big picture without losing the necessary details. The model employs a dashboard concept which allows the user to interface with data representations such as an installation level map, a building interior layout, and supporting tabular data. This allows consumers of solutions to readily see relative size and proximity of buildings, rooms, and personnel for an entire site. The user is able to visualize current conditions, various proposed optimization solutions, and manually adjust conditions.

To address site level visualization a tool that referred to as unit square diagram was developed. This technique compresses a building into an abstract rectangle, eliminating space between buildings. It concentrates focus upon the factors being modeled, while retaining a visual perspective. The abstract buildings are oriented by proximity to those around them. The polygon size represents useable resources. Each can be further subdivided into rooms. Relative position to the real world location is maintained with multiple floors delineated.

Symbolization is applied to show spaces that are appropriate for specific use types. The diagram provides a dense and concise visualization allowing user interaction with the massive and diverse data associated with a complex facilities space. From one data view, the user can interact with data for an entire installation at the building, room, or personnel level.

Department of Defense, Air Force

Using Portfolio Data to Drive Space Efficiencies

The Air Force Sustainment Center (AFSC), Headquartered at Tinker AFB, Oklahoma, was activated on 1 Oct 12. This restructuring of the AF's industrial complexes, realigned over 45.6M GSF of unique operations under one Command. Manpower reductions, fiscal constraints and the "shrinking installation footprint" have been significant drivers for transformation within the AF. Another important driver was Executive Order (EO 13327) that mandated the establishment of Real Property Asset Management, with distinct and measurable elements that moved us toward portfolio optimization and greater cost efficiencies. In response to these challenges and opportunities, the AFSC Commander set a goal to institutionalize an Asset Management approach in day-to-day business practices and to establish Key Performance Indicators (KPIs) to evaluate success. This effort integrated three distinctive base-level methodologies into a standardized approach to evaluate the efficiency of administrative space use within the AFSC portfolio and to develop a plan to right-size the portfolio. The methods adopted by this highly motivated team will allow the commander to make better informed decisions on how to manage assets and provide uniform standards across the AFSC installations.

The AFSC team, comprised of subject matter experts, began project execution by conducting a series of informational meetings to discuss and incorporate the best elements of approaches utilized by each portfolio manager. Analysis of the administrative space portfolios quickly revealed that data formats varied; for example, there were variations seen in the formatting of AutoCAD and GIS files as well as with data elements, and the scope and content of collection methodology. This lack of standardized data and collection procedures created inefficiencies. Procedures for common space architecture varied with unconventional naming and numerous CADD standards in use. A cross-section of facilities across the portfolio indicated a 5-10% variance in space

utilization, due to data structure differences. The space data collection process was defined through standardization of field data collection, including measuring and polylining according to a single methodology, modified BOMA (Building Owners and Managers Association) international standards. All structures and spaces were redefined using official Air Force Real Property identifiers and cross-walking these with OSCRE (Open Standards Consortium for Real Estate) international space categorization standards. Business rules were published to define the process going forward and how data would be collected and managed for the AFSC.

To provide visibility of the AFSC portfolio and to improve stewardship of this AF federally-owned property, the Tinker Integrated Workplace Management System (IWMS) Commercial Off-The-Shelf (COTS) web-enabled solution is used to host AFSC real property and space data. The use of industry standards as a part of this IT system informed the Center's approach on how to measure space within a building and the policies and best practices that were adopted for this project. The ultimate standardization of the AFSC portfolio data allowed development and publishing of KPI's for administrative space occupancy and demolition goals for underperforming buildings. The AF adopted a 150 USF/P standard and the AFSC portfolio analysis (as of May 2013) shows an average of 177 USF/P. This places the portfolio 17% above the AF goal, which means that further work is needed to reduce the underutilized administrative space. Being able to standardize and evaluate apples-to-apples space data has allowed the AFSC to maintain a portfolio visibility that is not available to other commands. The space and occupancy analysis with the portfolio led to an understanding of underutilized assets. To date, AFSC has demolished over 1.9M GSF of space within the portfolio. This equates to a savings of over $13.3M per year in operational costs. The newly devised right size plan is now on target to exceed AF demolition targets, by eliminating another 2M GSF of space, by 2020.

This process improvement has benefited the AFSC by allowing transparency and visibility into portfolio space utilization and subsequent demolition goals. This program was not only a huge success to AFSC but is highly transportable and is being used to equip the HAF/A7C NexGen IT system team with lessons learned for their portfolio-wide implementation effort. Solutions posed by this AFSC-level team may help to solve similar but larger scale challenges of non-standardized data facing the NexGen IT system configuration team. The lessons learned with needing standard data structure, use of industry standards (modified BOMA, OSCRE), authoritative CAD drawings and one GIS map for each location are key take-aways that have been cross-fed to other bases. This will result in significant savings in time and resources through future implementation of efficiencies bases on real world AF experience, as the AF stands-up space data for over 600M GSF of facilities nationwide.

This project embodies the high standards of the GSA Achievement Award for Real Property Innovation, and is making a unique contribution to Air Force strategic planning needs in our challenging fiscal environment.

Department of Treasury/Internal Revenue Service

Space Optimization

In September 2011, the Real Estate and Facilities Management (REFM) organization developed a plan to address the challenge of dealing with a flat rent budget in the face of increasing rent costs. The approach to generating these savings was through:

- Reduction of excess space
- Consolidation of an IRS data center into the remaining two centers. This will also move the IRS towards implementing the foundational characteristics of world class data centers.
- Closure of small posts of duty (PODs)
- Closure or consolidation of certain large and mid-sized PODs.

Initial plans for this initiative, were generated from REFM's Graphical Data Interface (GDI). GDI was developed by REFM. It is our dashboard-based information system used to manage IRS real property portfolio data.

Recognizing delays and stoppages to potential space reduction projects that had occurred in the past, the team embraced a multi-faceted collaboration and communication strategy.

Representatives from all IRS business units served on a team to implement "Space Optimization" and early plans were shared with the National Treasury Employees Union (NTEU). Multiple conference calls were held with these leaders and interactive Frequently Asked Questions were developed. Feedback was requested from managers and employees in impacted locations, and recommendations were incorporated into the development of the plans. In addition, labor relations specialists, at the local and national level, and work life subject matter experts were mobilized across the IRS to assist with change management. Leading the change through these proactive steps enabled the team to quickly gain agreement from all stakeholders. This approach also guaranteed there was no impact to taxpayer service.

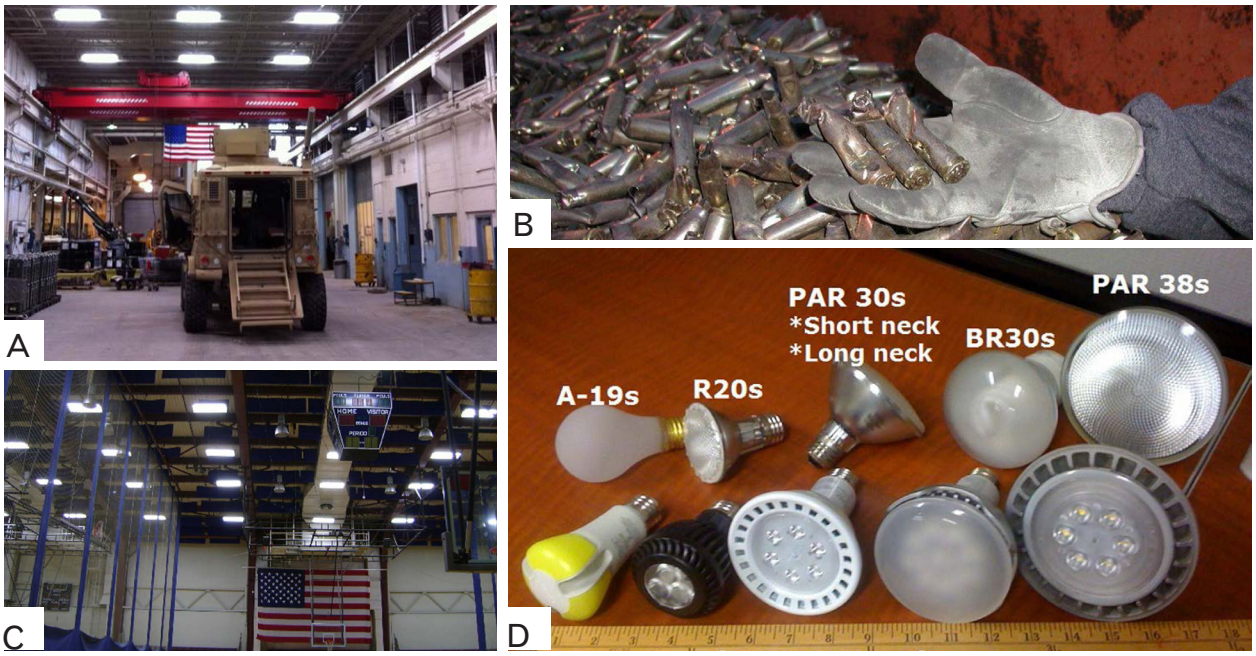
To show impact to every level of the organization, REFM tackled a difficult restack of the Main IRS building. This was done with a minimalist approach and it enabled REFM to relocate most of the Large Business and International Operating Division from the Mint and Mint Annex buildings into the Main IRS building.

To accomplish the goal of "Space Optimization", we recognized the need to introduce innovative tools that would enable us to close certain small PODs. Home as a POD (HaP) was a new concept for the IRS, where employees work exclusively from their home. HaP was pursued as a mitigating strategy for the small POD closures where there was not another POD in the commuting area.

As "Space Optimization" was being implemented, the Director, REFM was negotiating telework and workstation sharing, with NTEU. He was successful in significantly expanding telework and reached a 3:1 ratio sharing agreement in smaller workstations. When these negotiations were completed in June 2012, many of the "Space Optimization" projects were re-scoped to incorporate the new housing concepts. Through this effort the IRS saved $13.1 million in 2012, and nearly $9 million has been saved in 2013. The groundwork has been laid for out-year savings. Large scale projects that are underway include consolidation of the Midtown Manhattan office (FY 2014) and consolidation of the Detroit Computing Center into the Memphis and Martinsburg Computing Centers (FY 2015).

Sustainability

This award recognizes exemplary initiatives, innovations and projects in Sustainability and communicates these cutting-edge ideas to agencies striving to improve their real property management. Achievements are related to sustainable business practices in the area of green buildings and workplaces, such as developing healthy, high-performance work environments and using environmentally responsible materials, methods and principles. Practices include alternative work strategies such as telework.



Images, clockwise : A) Programmable Ballast Installation. B) Qualified Recycling Program Expended Brass Collection. C) Programmable Ballast Installation. D) Replacements for all Incandescents & CFLs with long lasting LEDs.

Winner

Department of Defense, United States Air Force

Alaska's Sustainable Base: Joint Base Elmendorf Richardson (JBER)

Joint Base Elmendorf-Richardson's (JBER) rugged terrain, harsh climate conditions, and remote location present significant challenges to sustainability and energy efficiency. Home to about 16,000 Arctic Warriors, JBER's 84,000 acres support Air Force flying missions for the F-22 Raptor and C-17 Globemaster, as well as, training for US Army Alaska (USARAK). At JBER, sustainability is a primary mission support platform recently formulated under the umbrellas of Environmental Management Systems (EMS) and Asset Optimization (AO). EMS and AO form the backbone for management of all base resources with focused goals to minimize generation of hazardous wastes, reduce the use of hazardous materials, develop recycling programs, and implement energy conservation initiatives. These programs are guiding principles for a sustainable JBER where

Images, clockwise : A, B, C) Acousitic And Visual Behavior Studies On Endangered Cook Inlet Beluga Whales. D) Qualified Recycling Program Even In Winter. E) Qualified Recycling Program 208K Lbs Of Paper.

less funding is spent on waste and energy, and more on training Soldiers and Airmen to carry out their missions. Joint Base Elmendorf Richardson's accomplishments include: Partnering with the local Utility, in January of 2013 the JBER Landfill Gas Waste to Energy Plant began operation. The Plant is projected to generate more than 56,000 megawatt hours or 26.2 percent of JBER's electrical load. Not only does the plant surpass renewable energy goals established by Executive Order but it will also reduce greenhouse gas emissions (methane) by 13,944 tons and is projected to save $73.6M over the 46 year project lifecycle.

The JBER Energy Management Team proactively pursued projects to eliminate inefficient lighting systems, resulting in over $500K cost savings annually. These projects included incorporating programmable ballasts into high-bay lighting systems; replacement of incandescent bulbs with high-efficiency LEDs; Energy Management Control Systems; and, renovation projects that take advantage of natural light during long Alaskan-summer days. JBER overcame significant obstacles to recycling and opened the first-ever JBER Recycling Center. During initial operations, the center collected over 50 tons of cardboard that was sold to a local manufacturer for production

Images, clockwise : A) Joint Base Elmendorf Richardson Landfill Gas Electrical Power Plant. B) JBER Landfill Gas Electrical Plant - (4) 1.2 MW Generating Units. C) Over 3,000 Saplings Planted To Replace Beetle-Killed White Spruce Habitat.

of insulation that is now keeping Alaskan homes warm and more energy efficient.

Partnering with state and federal agencies bolstered successful wildlife and land management programs. Biologists from JBER and the National Marine Fisheries Service partnered to conduct acoustic and visual behavior studies of the endangered Cook Inlet Beluga Whale. These efforts are critical to maintaining Air Force and Army missions at JBER, and to the recovery of the endangered whale.

Sustainable Master Planning with a commitment to the Integrated Design Process is producing green buildings that meet Leadership in Energy and Environmental Design (LEED) program goals. Almost $1B in new building construction meets the LEED Silver rating with reduced energy consumption, critical to sustainability in an Arctic environment.

JBER has a reputation in the Air Force for innovation and is paving the way for others to follow. We strive to lead the Air Force by implementing innovative sustainable technologies. These technologies can be implemented anywhere and serve to be an inspiration for turning a today's challenges into tomorrow's realities.

Sustainability
Recognized Entries

Honorable Mention

Department of Commerce

National Oceanic and Atmospheric Administration (NOAA) – Climate Change Vulnerability Analysis (Executive Order 13514)

The Interagency Climate Change Adaptation Task Force determined that federal agencies have a critical obligation to carry out adaptation planning since climate change threats can directly affect a wide range of Federal services, operations, programs, and assets. NOAA actively considers, opportunities to improve facility energy sustainability and avoid or reduce environmental impacts. To support NOAA executive level management implementing EO 13514, a two-phased analysis of NOAA-owned mission-critical property vulnerability to climate change threats was developed. This report describes the approach, methodology and results of the first phase. The objective of the NOAA Property Climate Change Vulnerability Analysis was to meet the requirement for all federal agencies to evaluate climate change risks and manage effects of the climate change on the agency's mission and operations. Results included properties ranked according to risk of vulnerability to climate change threats and a compilation of data to carry forward into other property mitigation measures and property disposition decisions.

Special Achievement

General Services Administration, Public Buildings Service, Mid-Atlantic Region

GSA Mid-Atlantic Region VA Center Reverse Osmosis Team

As the federal government's landlord, GSA regularly seeks sustainable building technologies to help lead market transformation. The Mid-Atlantic Region implemented the reverse osmosis technology at the VA Center in Philadelphia, PA which has proven to be a successful means of reducing water consumption in the building.

Reverse osmosis (RO) is a membrane filtration method that removes large molecules and ions from solutions, allowing purified water to pass through and leaving behind dissolved solids. Improving the towers ability to operate at greater cycles of concentration saves water because it means that far less water needs to be added to the system to remove dissolved solids. This process increases the efficiency of water cooling towers, which are a significant source of water use at facilities. Membranes were installed at the VA Center in 2012 and have already demonstrated both monetary and environmental savings.

The team regularly monitors the system to ensure continued operations and improved performance. Prior to the RO Project, VA Center cooling towers were running at 4-5 cycles of concentration. This has now increased to nearly 100 cycles of concentration after installation. A $150,000 investment has led to nearly 3 million gallons of water saved per year, meeting water savings goals in compliance with Executive Order 13514 and the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. The team is further exploring alternative uses for rejected water, which could result in additional savings, as well as reducing the chemicals used to treat water. The RO process in government facilities is novel and can be replicable in other facilities, potentially leading to a more standard practice.

Environmental Protection Agency

EPA: Transforming Existing Buildings into High Performance and Sustainable Buildings

The federal government has made tremendous strides in designing and building new energy efficient, sustainable buildings, but it is the existing buildings that make of the bulk of the built environment and that represent the biggest opportunities to reduce energy and water use and improve Indoor Environmental Quality. EO 13514 recognized these opportunities and set challenging goals for federal agencies to transform existing buildings into high performance sustainable buildings (HPSBs). 15 percent of existing buildings must be high performance buildings by FY 2015 and the federal government must increase that share each year thereafter.

Transforming an existing building to HPSB standards involves major improvements in energy efficiency, water efficiency, storm water management, sustainable and integrated operations and maintenance, and addressing approximately 25 additional environmental aspects of building operation. It also requires documentation and quality assurance processes to be credible. Self certification by facility managers, while in-expensive, can often produce “optimistic” results regarding HPSB compliance that don’t stand up to 3rd party verification. Existing Green Building Rating Systems often have extremely rigid

and costly documentation requirements for certification, and do not cover all the Guiding Principles and related sub-principles. EPA has pioneered an independent path of assessing, addressing, improving, and certifying existing buildings as HPSBs that is more cost effective for taxpayers, was developed, in part, from on the ground experience of our facility managers, provides comprehensive documentation and transparency, and allows the agency to focus on improving environmental performance rather developing complex submission requirements for green building rating system certification. EPA is one of only five federal agencies that met or exceeded the FY 2012 requirements for Green Buildings on OMB's Environmental Stewardship Scorecard. 9.8 percent of EPA's projected FY 2015 building inventory meets the Guiding Principles, and EPA far surpasses the federal government's overall performance in this area. EPA's thoughtful approach to evaluation, improvement, and documentation of its Existing Building transformation efforts produced these outstanding results.

General Services Administration, Public Buildings Service

Variable Frequency Drives

As a part of ongoing efforts to improve plant operations, reduce costs, and move toward being a more environmentally green facility, the HOTD Variable Frequency Drives Project team members turned their collective expertise toward improving the energy efficiency of water pump motor speeds, confirming once again that minor adjustments produce major results.

Oftentimes when a motor operates at a fixed speed, more energy is used than is needed, thus energy is wasted. A variable frequency drive (VFD) precisely controls motor speed to reflect actual demand, and it eliminates energy waste caused by fixed-speed operation. The HOTD team improved the methodology of plant operations by installing two VFDs on two 400HP feed water pumps.

By adding VFDs to the pump motors, HOTD was successful in generating $125,000 of annual end-user savings. This arrangement also reduced a number of operational difficulties in addition to saving previously wasted energy.

HOTD provides steam heating and chilled water cooling to approximately 80 federal and quasi-federal buildings in the heart of Washington, DC, totaling approximately 70 million square feet of space, and also provides chilled water for cooling to eleven of these buildings located on and adjacent to the National Mall. While providing these services, HOTD operates efficiently, and its team members are always working toward minimizing the use of energy resources for maximum results.

General Services Administration,
Public Buildings Service

Water Conservation and Reuse Project

The Water Conservation and Reuse Project of the Heating Operations and Transmission Division (HOTD) would eliminate approximately 50% of plant water intake, representing about $1.6 million in savings. These savings include reducing the use of softeners and dealkalizers, improving boiler function, and reducing the waste stream of water in cooling towers. This project not only reduces costs to HOTD and its customers, it also serves to make the plant a more environmentally green facility.

General Services Administration,
Public Buildings Service

GSA Iowa Energy Program

The General Services Administration's Iowa Service Center expertly operates and maintains a $41 million portfolio of five buildings statewide encompassing 780,000 square feet and supporting 45 federal agencies and 1,250 tenants. The Field Office's geographic area in the Heartland Region of GSA covers 35,000 square miles, and the average age of its buildings is 65 years. The Iowa Service Center has emphasized an innovative and proactive, three-fold approach to energy management: Education, Auditing and Community Partnership. During this past year GSA also invested heavily in Iowa with $40 million in ARRA infrastructure upgrades for mechanical/electrical systems statewide. Smaller-scale investment projects included exterior lighting, LED retrofitting, elevator cab LED retrofitting, vending misers, interior lighting motion sensors, cloud-based servers, advanced metering and operational equipment adjustments. During the past year Iowa has saved $102,500 in energy and since 2007 they have saved more than $610,000 in energy costs while securing $412,000 in energy rebates. The portfolio's overall Energy Star rating is currently 90% (+14 from base) with a -24.7 change from baseline in Energy Star. In support of EO 13423, Iowa's overall percentage change from the 2003 baseline has already exceeded the executive mandate three years ahead of schedule with an overall 31.3% reduction. The Iowa Service Center earned the EPA's Top Performer, 10% and 20% Awards and the Neal Smith Federal Building (NSFB) finished 3rd overall during the FEMP 1st Annual Better Building Award. The NSFB also finished in the top 1.68% of more than 3,200 buildings nationally during the EPA 2012 Battle of the Buildings.

General Services Administration,
Public Buildings Service

Heartland PBS Targeted E4 Project

In 2012, the GSA Heartland Region Energy Team adopted a new strategy to increase energy efficiency and reduce energy usage in federal facilities. The team worked with DOE Pacific Northwest National Laboratories (PNNL) to craft a Targeted E4 approach, which focuses on no- and low-cost re-tuning of building control systems, schedules and operations. The

Targeted E4 was tested in four buildings during 2012, resulting in 0.6-18.7% energy savings.

Building system re-tuning was identified as an area of opportunity after the team worked with PNNL on traditional Expert Energy Efficiency Evaluations (E4) beginning in 2007, and after a DOE study determined that while traditional E4 facilities decreased energy use by 6.4%, only half of the recommended measures were implemented and control systems measures were a major challenge. This was due in part to the staff's level of knowledge and confidence about adjusting control settings and sequences. Training and technical support for this is a primary focus of the Targeted E4.

1. The Targeted E4 is being applied at six sites during 2013 and will be further replicated moving forward. Targeted E4 has been highlighted to federal agencies through a national FEMP webinar and a Federal Interagency Sustainability Council meeting.

Department of Veterans Affairs
Cooking Oil Management and Recycling

Our entry is submitted under the Sustainability category. We used concepts from the Environmental Protection Agency's (EPA) food source reduction model, VCS internally developed food preparation procedures and used cooking oil (UCO) recycling procedures to design and develop our Cooking Oil Management and Recycling Program. Our program reduces the amount of cooking oil we purchase, manages cooking oil useful life, recycles spent cooking oil, and enhances the safety of our food service workers.

We analyzed our national food purchases to look for food source reduction opportunities. Cooking oil was identified as a food inventory item with high sustainability impact based on the volume purchased, available manipulation procedures, the existence of a nationwide recycling infrastructure, and significant oil handling safety enhancements available. VCS purchases one million pounds of cooking oil annually. Quick service restaurant industry guidelines suggest that 67% of cooking oil purchased can be recycled.

We process mapped VCS cooking oil management procedures to determine if that body of knowledge could be enhanced or made more efficient. We determined that: we were not taking advantage of higher performing synthetic cooking oils; we had no standard method to determine when the cooking oil had reached the end of its useful life; we had no standard operating procedure on how to dispose of cooking oil in an environmentally sound manner; and there was room for improving food service worker safety while handling hot cooking oil. Based on this information, we launched a cooking oil pilot project designed to; identify a higher performing cooking oil available system wide; identify a standard method to determine when the cooking oil reached the end of its useful life; identify standard used cooking oil recycling procedures we could replicate system

wide, and enhanced cooking oil management safety procedures. The pilot included 10 VCS Patriot Café field locations, three VCS Central Office departments, 30 participants, and completed in six months.

General Services Administration, Public Buildings Service

GSA R2: Sustainability with Savings

GSA Region 2 (Region 2) began purchasing renewable power – in quantity – well before the Energy Policy Act of 2005 and Executive Order 13423 requirements promoted green purchasing. Since FY01, Region 2 has purchased over 805 million kWhs of renewable power, ranking it 6th on the top-ten list of largest purchasers of green power among Federal government organizations within the Green Power partnership. It's commitment to green power usage has also earned it several awards, including a 2008 FEMP Renewable Energy Award for procuring 100% green energy for the National Park Service on behalf of the Statue of Liberty and Ellis Island. Region 2 also received the 2011 Energy New York Award (ENYA) for a major procurement that resulted in significant renewable power for GSA's Manhattan Service Center.

Continuing its leadership role, Region 2 ran competitive procurements in FY11 and FY12 that resulted in tens of millions of dollars in savings while enabling significant quantities of green energy to be purchased. These included including 100% renewable power for the United Nations; 100% green energy for the GSA Manhattan Service Center; and 7.5% green power for the GSA Upstate Service Center.

Department of Commerce

Department of Commerce, National Institute of Standards & Technology, Net-Zero Energy Residential Test Facility

In a ribbon-cutting ceremony on September 12, 2012, the National Institute of Standards and Technology (NIST) unveiled a new laboratory designed to demonstrate that a typical-looking suburban home for a family of four can generate as much energy as it uses in a year. Following an initial year-long experimental phase, the facility will be used to improve test methods for energy-efficient technologies and develop cost-effective design standards for energy-efficient homes that could reduce overall energy consumption and harmful pollution, as well as save families money on their monthly utility bills.

This unique facility looks and behaves like an actual house and was awarded U.S. Green Building Council LEED Platinum status—the highest standard for sustainable structures. The two-story, four-bedroom, three-bath Net-Zero Energy Residential Test Facility incorporates energy-efficient construction and appliances, as well as energy-generating technologies such as solar water heating and solar photovoltaic systems.

Results from this lab will demonstrate whether net-zero home design and technologies are

ready for neighborhoods in America. It will also allow development of new design standards and test methods for emerging energy-efficient technologies and their speedy delivery to the marketplace.

The project was funded by the American Recovery and Reinvestment Act of 2009, which included green technologies among its priorities. Through its Building America effort, the Department of Energy (DOE) provided architectural design, training and management support for this project.

For the first year of its operation, the house will be used to demonstrate net-zero energy usage. NIST researchers will use computer software and mechanical controls to simulate the activities of a family of four living in an energy-efficient home. No actual humans will be allowed to enter the house during this time so that researchers can monitor how the house performs, but lights will turn on and off at specified times, hot water and appliances will run—and small devices will emit heat and humidity just as people would.

A solar photovoltaic system will generate electricity to power lights and appliances when weather permits, and excess energy will be sent back to the local utility grid by means of a smart electric meter. The house will draw energy from the grid on days it cannot generate enough on its own; but, over the course of a year, it will produce enough to make up for that purchased energy, for a net-zero energy usage.

NIST researchers plan to make data from the net-zero experiment available online so that researchers and the public can follow its progress.

Department of Commerce

Department of Commerce, National Institute of Standards & Technology, Child Care Center

NIST Gaithersburg campus' new LEED™ Gold 23,000-square-foot (2,100-square-meter) Child Care Center was dedicated on Feb. 21, 2012. The new $7.2 million center is three times bigger than the previous 1960's era Child Care Center it replaced, and it was designed and constructed to accommodate 154 children which represents a 50% increased enrollment capacity. Despite being significantly larger in size, it consumes 66% less energy than the previous facilities that housed the students.

The building was designed to meet the licensing requirements of the National Association for the Education of Young Children (NAEYC) and the recommendations of the United States General Services Administration's Child Care Center Design Guide. This resulted in windows that start close to the ground so the children can see out, an overhead canopy off the back for rainy-day outdoor activities, separate playground areas for different age groupings, and classroom reading nooks for teachers to read to children.

A multipurpose room for large gatherings of special visitors was constructed in the heart of

the facility. It permits performances by students and large parent/student gatherings, or indoor play space during inclement weather.

The facility has many unique features not common in a typical federal facility – rounded walls, lavatories and sinks within classrooms, windows in corridors to view the students in the classrooms. It also includes a room designed similar to that of a 911 call center, so the students and staff are able to shelter in place during severe weather. Previously, during severe weather, the students would have to travel over a ½ mile to a neighboring laboratory facility.

The facility complies with Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, as well as the Energy and Independence Act of 2007. Those measures include day light sensors that shut off lights when there is sufficient natural light, solar power to heat the building's water, low-flow faucets and toilets, and high-insulation-value windows and walls.

At the ribbon cutting, NIST Director Dr. Patrick Gallagher said "Having had all three of my sons attend the NIST Child Care Center, I know first-hand the importance of quality child care. The funding provided by Congress to build a new facility in Gaithersburg allows NIST the opportunity to continue to meet the highest standards for child care and at the same time expand the program so that more NIST staff can enroll their children."

Department of Commerce

Department of Commerce, National Institute of Standards & Technology, Green (Free) Cooling

NIST is a non-regulatory federal agency within the U.S. Department of Commerce. NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. The agency headquarters and the majority of its laboratories and support space are located on a 234-hectacre/578-acre campus in Gaithersburg, Maryland. NIST employs about 3,000 scientists, engineers, technical, and support personnel, as well as hosting about 2,700 associates from academia, industry, and other government agencies who collaborate with NIST staff and access user facilities.

The NIST Gaithersburg campus is supported by a central utility plant (CUP) that produces and delivers chilled water for cooling purposes to more than 35 facilities across the campus. While electricity is the technological medium that moves society and the nation, chilled water is a close second in importance at NIST because of the demands for cooling varied and complex scientific equipment and laboratories. Due to the scientific research operations at NIST, cooling is needed year round regardless of the outside air temperature. Construction on a new cooling tower was completed in

April, 2011. The tower produces 42 degree chilled water based upon the ambient (wet bulb) temperatures during the cooler winter months. The cool air temperatures naturally create the chilled water versus having electrical refrigeration units produce the chilled water. The genesis for this idea was developed by NIST personnel while they were concluding that the existing multi-cell cooling tower needed replacing. The existing cooling tower had reached the end of its useful life and its deterioration was accelerating. In order to replace the existing cooling capacity, a stand-alone cooling tower was needed to carry the load during the winter months, which is the lowest demand period. NIST personnel determined that "green or free cooling" could be produced naturally during the winter months versus having to create chilled water with refrigeration units.

The green/free cooling tower produces 3.4 million tons of cooling annually. It saves 1,105 megawatt hours of electricity annually - equivalent to powering 98,000 average homes in one year. This cooling will prevent 760 metric tons of CO2 annually from being created. The annual financial savings to NIST will exceed $120K.

Green/Free cooling is not a new idea. It has been utilized in various forms for over 30 years via different applications. In the U.S. northern latitudes, annual weather temperatures are ideal for "free cooling". Recently, the U.S. Department of Energy has encouraged the use of free cooling for IT Data Centers who similarly require cooling year round. The savings realized by NIST are easily replicated by others in northern cities.

General Services Administration, National Capital Region

CENTEX – Sustainability Action Plan

Michael McAvinn and Crystal Cavalier, members of the most recent GSA's Sustainability in Procurement Fellowship Cohort 4, collaborated together on a project from the central Texas region; in conjunction with representatives from the Department of Defense, U.S. Army, EPA and the local community leadership. This project is part of a 5-year Sustainable Communities Partnership that involves Fort Hood, TX, EPA, and the four surrounding cities of Killen, Copperas Cove, Harker Heights, and Gatesville.

The Sustainable Communities Partnership earlier had adopted a CENTEX Strategic Plan in 2011, of which one of their goals was the establishment of a Green Business Initiative. This was our project as Sustainability Fellows which was to develop a Green Business Certification program. The applicants put together a Plan of Action that outlined the needed marketing tools [slogan + elevator speech; Green Evaluation Tool; Commit To Green Campaign; website development; Game Board; and a green map] and programs [a 48-page CENTEX Sustainability Action Plan (SAP); CENTEX Green Business Challenge and

CENTEX Green Business Certification] plus a timeline.

The SAP is a comprehensive regional sustainability plan that was developed on a framework of systems integration, such as environmental management systems and feedback loops. The need to de-carbonize the energy supply is an overarching objective for the region. This plan is the development of a new regional input-output model as it relates to Fort Hood and its multiplier effect to the surrounding economy. The focus will be on the symbiotic relationships involving key area industries' synergies for creating value-added competitive advantages for the business community by enhancing the sustainability of supply chains, procurement of strategic sourcing, and logistics. This will encourage the development of innovation processes and products that compliment sustainability practices that enhance the economic vitality and improve the quality of life.

A major feature of the SAP is the Fort Hood Sustainability Procurement Strategy, which requires that majority of all tangible goods are procured within a 500-mile radius of Fort Hood, TX. This encourages the regional development of a sustainable supply chain, reduces the level of green house gas emissions and empowers the local economic development efforts. An example of the latter is the development of Supplier Parks that fulfill the Procurement Strategy, while also attracting new companies into the region.

Some of the other features of the SAP include: Green Purchasing Alliance; Coryell County Rural Regional Innovation Cluster; Bell Green Commons; Decon Recycling Center; Eco-Industrial parks; Microgrids; and Adopt-A-Vet Business program.

Workplace Innovation

This award recognizes exemplary initiatives, innovations and projects in Workplace Innovation and communicates these cutting-edge ideas to agencies that aim to improve their real property management. Achievements are related to creating workplaces that are focused on the future by fostering environments that incorporate integrated and sustainable approaches, enhances employee and business performance, that result in long-term cost savings and design.

Winner

Department of Homeland Security

DHS Flexible Workplace Strategies

Public sector real estate management is governed by federal law, strict regulations and executive orders. Decisions made over the federal portfolio are not profit driven as they are in the commercial sector. While not profit driven, federal real property managers do manage to very strict budgets and we are accountable for those decisions that in many cases incur obligations to house our operations of tens and occasionally hundreds of million dollars. We manage real estate and must spend wisely and be fully responsive to all our stakeholders- the taxpaying citizens, the President, OMB, Congressional Members and our agency leadership.

Real Property Portfolio Management is a challenging in the current federal environment of limited budgets and scarce resources. It is DHS's goal to reduce the cost of maintaining our office real estate portfolio while maintaining mission readiness. DHS will accomplish this by improving real estate asset performance through increased utilization and footprint

reduction and achieve affordable readiness. We are redefining how we use our office real estate, and how real property requirements for mission support and mission execution is defined. It is our expectations that doing so will improve cross-departmental management and functional integration. Our collective efforts will deliver a portfolio of office assets that are sustainable, and designed not for the workforce of yesterday, but for the mobile workers of today and tomorrow.

DHS recently completed a two year successful partnership with the GSA's Workplace Solutions group to assess how DHS uses office space in the NCR, and how it could do so more efficiently. In collaboration with the Workplace Solutions group, DHS conducted a space use assessment of Headquarters functions followed by the introduction of flexible workplace strategies. Through this process, we introduced concepts of leading edge workplace designs which are resulting in higher space utilization and include hoteling (reserving space as needed) , touchdown spaces (first come first served) and collaboration space. This was not just a DHS Headquarters' initiative. In a premier example of how the Department is working together to not only execute mission, but also mission support, all DHS Headquarters components participated in the two year office space assessment. In total, the DHS groups represented over 7 million square feet and over 20,000 federal employees in the Washington DC metro area. Over the two year effort, we educated leadership, management and our real estate professionals on leading edge real estate office design practices. The results of the collaboration determined that aggressively implementing flexible workplace strategies, DHS could reduce space by approximately 5% per year with a potential 25% reduction in office space, by 2018. Current inventory is turning over 10%-15% per year. Opportunities for space redesign mainly present themselves at lease expirations. As the adage goes, real estate is a long lead item, and as federal real estate managers, we must remain assertive, vigilant and focused on the long-term potential for footprint reduction and aggregate cost reductions.

This project could not have succeeded without the full engagement of the GSA Workplace Solutions Group and their expertise allowed successful completion of this very important initiative. This collaboration helped to educate DHS leadership; management and real estate professionals on the potential for substantial space efficiencies and cost savings by delivering properly designed office space and incorporating flexible workplace strategies. The result of the project has positioned DHS to be one step ahead of the cost and space reduction curve and prepare to deliver affordable readiness.

Workplace Innovation
Recognized Entries

Honorable Mention

General Services Administration, Public Buildings Service

Region 5 GSA Public Buildings Service Restack Project

In 2002, GSA Region 5 Public Buildings Service began a project to replace the 20-year-old high-panel systems furniture in its Chicago headquarters and implement open office planning. Before the project, the headquarters' offices varied greatly, and workstations ranged from 36 to 100 square feet. The new design standardizes workstations to 64 sf and interior offices to 130 sf.

By 2012, even with efficient space layouts, the office was no longer being utilized effectively largely due to increased telework. In March 2012, Region 5 embarked on a project to re-examine how its workspace was being used, eventually producing a plan to reconfigure our existing systems furniture to significantly streamline the Regional Office and take advantage of new mobile technologies.

Key Drivers:

- 2010 Presidential Memo – Disposing of Unneeded Federal Real Estate
- 2010 Telework Enhancement Act
- 2012 Presidential Memo – Promoting Efficient Spending to Support Agency Operations
- Mobility-Enabling Technology
- Environmental Concerns

Objectives:

- Create a place where people want to work
- Encourage and support collaboration while improving productivity
- Produce energy and carbon savings
- Improve the utilization of real estate
- Re-utilize/re-purpose existing furniture
- Keep costs to a minimum

Individual 8' x 8' cubicles were transformed into pods of bench-style workstations, capable of accommodating two or more people in the same amount of space. Unnecessary panels and components were removed in order to open up the space, but the center power spine was kept intact to avoid construction costs. Removal of outer panels allowed for better collaboration and teambuilding. Mobile employees were allowed to bring a monitor home for teleworking. With plug-and-play phones, employees could use a desk phone, soft phone, smart phone, or any combination. Ultimately, the consolidation allowed Region 5 PBS to cut nearly 23,000 square feet from its regional headquarters, eliminating an entire floor (25% of its former footprint).

Because of this consolidation, several manager offices moved into former team rooms, and the number of available team rooms decreased. To offset the loss, each manager's office became a team meeting space when the manager wasn't in. Tables and chairs replaced the traditional L-shaped work surface in these office/team rooms.

The success of this project has been attributed to the options made available to everyone. Regional staff chose the number of days they wanted to telework (up to four/week). Each "mobile worker" – anyone teleworking five or more days per pay period – was assigned a locker and mobile pedestal, allowed to choose desk-sharing or hoteling, given a choice of three cubicle configurations, and allowed to take home their monitor and other computer equipment. Others teleworking less than five days per pay period could also choose desk-sharing or hoteling or keep their standard cubicle. In the new mobile spaces, four standard cubicles became a workspace for eight, doubling the capacity. Feedback from the project was positive, and everyone was thrilled with the freedom they had to make choices in their workplace.

Special Achievement

Department of Homeland Security

Field Operations Facilities Program Management Office – Mobile Workforce Program

U.S. Customs and Border Protection's (CBP) Field Operations Facilities Program Management Office (FOF PMO) submits this nomination in support of the U.S General Services Administration (GSA) Achievement Award for Real Property Innovation. Over the course of nearly two years, the FOF PMO worked to successfully implement a Mobile Work (MW) Program, as directed by the agency.

As the Federal government continues to operate in an environment of decreasing fiscal resources, managers must find new and inventive ways to accomplish their mission with a smaller share of resources. Through MW, FOF PMO has found a way to maintain seamless day-to-day operations despite these economic

realities. Instead of commuting to a traditional office environment five days a week, FOF PMO employees based in the Washington, D.C., office now work from a mobile location three days of each week, and report to a new workspace the remaining days, customized and designed solely to support a mobile work model.

More than simply telework, the MW program encompasses a workplace philosophy focused on results, flexibility, and mobility. While the task of transitioning all 50 FOF PMO employees to the new mobile arrangement had challenges, the success and best practices learned from the program will serve as a baseline for the broader organization as the FOF PMO moves into the next phase of our efforts. Indeed, the FOF PMO is already providing guidance to other offices within CBP as to how best to implement a MW environment in accordance with each office's particular needs.

General Services Administration, Public Buildings Service

Mid-Atlantic Region FAS/ PBS Joint Mobility Pilot

The GSA Mid-Atlantic Region implemented a cross-organizational mobility pilot in January 2012, where 93 regional employees representing various business lines volunteered to move out of their permanent workstations into a mobile work environment. Participants tested new technologies, including a QR code check-in system for desk reservations, laptop soft-phones that replace hard lines, and new collaborative technologies offered through tablets and Google applications. GSA mobility pilot participants saw a reduction in commuting hours and employee sick/vacation leave, and 98% of participants would recommend mobility to their GSA peers and share lessons learned with other federal agencies interested in expanding mobility.

U.S. Agency for International Development

USAID Washington Learning Center

The Washington, DC Headquarters location for United States Agency for International Development (USAID) is pleased to submit its entry for consideration in the 2013 GSA Achievement Award for Real Property Innovation. Our entry under the category of Workspace Innovation, represents the epitome of innovation in the workplace.

USAID undertook this project due to insufficient space in the basement of the RRB and in other leased locations for training needs. Today's development organizations are proactive in sponsoring education that align key skills with organizational strategies and is delivered using modern methods and technologies. Like our peers across the government and among other international development organizations, USAID is leveraging education to invest in our people and expand our capacity and capabilities. From

instructor-led classrooms to online courses and informal learning collaborations, the resources that this learning center provides help us advance as a learning organization.
The Washington Learning Center reflects flexible and collaborative workplace principles that utilize technology and mobility to increase user productivity while reducing real estate footprint, thus offsetting growth in carbon footprint and producing significant cost savings. This not only aligns with Presidential mandates, but also makes better use of operational resources by providing high quality spaces in efficient layouts.

The Washington Learning Center provides more than training rooms to house students. It provides a holistic experience in a learning institution that reflects a sound investment in the future of USAID. The value in this program is that it provides an example of a productive learning experience and an effective, functional workplace that can be adopted by other agencies.

General Services Administration, Public Buildings Service

Heating Operations & Transmission Division Electronic Resources Library

Throughout the years, HOTD has amassed many volumes of drawings and historical files pertinent to plant operations. In order to best maintain and organize the archives, HOTD implemented an electronic document management system for existing paper documents, which include 8.5" x 11" documents as well as Large Format drawings and maps. Recent research indicates that 10 to 15 percent of an average office worker's day is spent in an attempt to locate existing information and documents. By making accessible all stored HOTD plant drawings, user manuals, and other necessary plant documents via standard electronic formats, what was once physically difficult to locate and access is now easily available to employees from their desktop computers.

In addition, having these documents digitized and archived in a controlled environment has ensured their preservation for the future. Other advantages to digitizing HOTD documents include the reduction of personnel hours spent searching for the physical documents, waste reduction, and the creation of a cleaner, greener plant environment. Cost savings is yet another realized benefit of the HOTD Electronic Resources Library because digitized storage requires only a fraction of the space utilized by previous storage methods, and it dramatically reduces human demands on natural resources.

Some of the key benefits since the implementation of the Electronic Resources Library are faster and more precise retrieval of records; near immediate document retrieval for research and customer inquiries; secure archive and information retention; elimination of document storage space in file cabinets and

warehouses; smooth integration with existing systems; and disaster recovery capability.

HOTD provides steam heating and chilled water cooling to approximately 80 federal and quasi-federal buildings in the heart of Washington, DC, totaling approximately 70 million square feet of space, and also provides chilled water for cooling to eleven of these buildings located on and adjacent to the National Mall. While providing these services, HOTD operates efficiently, and its team members are always working toward minimizing the use of resources for maximum results.

HOTD has serviced its customer buildings for many decades, having begun the distribution of steam over 75 years ago followed later by chilled water services. During that time, HOTD has accumulated drawings and data of both current and historical interest. The Electronic Resources Library Project has been implemented to convert and organize existing physical documentation (drawings) from printed to electronic version, and to create a computer-based drawing storage system to store the documentation in an organized manner and provide accessibility for future projects and improvements to the plant

Department of Health & Human Services

"Tearing Down Walls" – HHS OCIO Collaboration Office Suite

In this time of the budget minded consumer, employers look for ways to save money, keep employee satisfaction and get daily work done in a quick and efficient manner. Creating a work environment where employees can work side by side, as well as from across the country. The new wave of the office worker today is one that can be completely mobile and work effectively in a collaborative environment. The technology of today allows for agencies and companies to be able to employ this mobile workforce easily and with a large return on investment.

The HHS OCIO Portfolio Management team had a view of creating the above work environment within the Cohen building in Washington, DC. The team tore down the typical cubicle-style work environment and created a hoteling and collaborating workspace. With this new office space, the view was to move not only the portfolio group, but also the enterprise architecture group.

Originally, the idea was to the rehab the space using an external contractor, but due to budget constraints, the team pursued a new venue. Through ingenuity and a dedication to make this project a reality, the team found cost effective ways to create this environment for minimal costs. By re-using warehouse furniture and making minimal changes by tearing down cubicle walls, the office space became a reality.

The space is now outfitted to accommodate approximately 40-50 employees full time, or 80-90 with telework. Collaboration areas for team

meetings are available for team use, as well as "break-out" cubicles for small one-on-ones or phone conversations. This tight knit working environment has created a new mentality to working together as a team and has improved project visibility between the two groups currently in the space.

General Services Administration, Public Buildings Service

Heartland PBS Mobility Test Bed

In late 2011, the Heartland Region PBS built a 6,800-square foot pilot project space, called the Mobility Test Bed, as an evolving laboratory environment allowing GSA to assess alternative work concepts in a real physical space. The space incorporates integrated, sustainable approaches to work environments and it allows R6 PBSers to try out workplace options like desk-sharing, free-address seating, huddle spaces and innovative technologies.

While other pilot spaces exist around the nation, a couple of unique factors of the Heartland's Test Bed are that the project is designed to unfold in three phases and that every R6 PBS associate will spend several weeks in the space in each phase. Another unique thing about the R6 Test Bed is that it is helping to shape the future space of the regional headquarters.

The space is also an extremely effective tool for marketing GSA's high-performing workplace solutions services to clients. More than 65 client tours and 20 presentations have been given and six new client HPW projects are underway as a result. Plus, in FY 2012, R6 received Central Office funding for three new HPW projects, the most in the nation.

Through HPW strategies, along with increased telework, the Test Bed increased space efficiency by 200 percent, placing 72 associates in the space previously occupied by 24. This is a 65.7 percent reduction in usable square feet ratio per person. By using desk-sharing and installing smaller, more collaborative units than traditional 6-foot-tall cubicles, employees in the Test Bed have desks at 25 percent of the cost of traditional office areas at Bannister.

Internal Revenue Service

Appeals @ 5000 Corporate Court

Appeals first stood up at the Brookhaven Campus in 2003 on the first floor of 5000 Corporate Court. The Unit moved to 1040 Waverly Avenue (Main campus building) in 2004 and grew to from 28 employees to 150. As their unit continued to grow, the need for space became an issue and these employees were scattered among five buildings throughout the campus.

This project was to obtain contiguous space to house the entire Appeals Function, which in turn, would release the pockets of space in the campus which could be more effectively used by the surrounding business

units. We have procured Tactical Office Solutions for our furniture acquisition. Tactical is a certified HUBzone Small Business. They are also a Service Disabled Veteran Owned SmallBusiness. Tactical has partnered with Davies Office Refurbishing, based in Albany as the furniture manufacturer.

This Tactical/Davies Partnership offers a very different approach to office furniture. Davies office furniture is an environmentally sensitive and creative solution as it is remanufactured furniture. The remanufacturing process takes existing furniture and strips it down to its core materials, removing old paint, fabric, and laminate. Once the furniture has been brought down to the core it is completely refinished with new paint, fabric and laminate. The end results are workstations that not only look and function exactly like new, but are also extremely eco-friendly. Almost no raw materials have been used, very little energy is required for the process, and a great deal of waste has been diverted from landfills!

General Services Administration, Public Buildings Service

Mid-Atlantic Regional Office Building New Lease

The Mid-Atlantic Regional Office has been housed at 801 Market Street since December 2002. GSA occupies the 8th and 9th floors in their entirety and approximately three quarters of the 10th floor with a total rentable square footage of 164,809. The current lease for 801 Market Street, floors 8, 9, and part of 10, was established as a 10 year lease in effect from December 2002 to December 2012 which gives the Mid-Atlantic Region the appropriate time to evaluate future space needs. The region will move from 133,128 usable square feet to 122,000 usable square feet for a reduction of 11,128 usable square feet. The project team will the team will explore the latest technology and housing trends in the industry that will help GSA comply with Executive Order 13514.

Department of Commerce

The NOAA Center for Weather and Climate Prediction

The NOAA Center for Weather and Climate Prediction (NCWCP), completed in August 2012, is a state-of-the-art, high technology facility that provides an efficient, flexible, pleasant, productive and sustainable work environment that is used on a 24 x 7 basis. It has an architecturally innovative design t h a t is executed in an environmentally sensitive manner, achieving a LEED Gold rating. The NCWCP is comprised of general office spaces, office support areas, mission critical spaces (computer rooms, weather forecasting operations, collaborative workspaces, modeling labs, etc.), and building-wide support spaces (auditorium, library, fitness center, deli, etc.). All of the engineering and data systems are integrated and controlled by a sophisticated Building Automation System. UPS systems and generators are provided to ensure continuous

operation of critical systems. This 268,762 square-foot facility will accommodate 800 employees and has conference space for approximately 500.Sustainable design strategies include water-sensitive site design, bioretention, energy performance optimization, natural daylighting, enhanced indoor air quality and increased thermal comfort and control. The building actively demonstrates sustainable water use. Green roofs comprise two thirds of the roof surfaces. These green roofs mitigate urban heat island effects and reduce the amount of rainwater that enters the storm water system. The remaining rainwater feeds into bioretention green areas.

The building's main axis orientation is primarily north-south, with two-foot-deep sun shades covering the entire south-facing curtain wall. This prevents glare and heat gain in the summer and allows natural light to penetrate deep into the spaces in the winter. Photoelectric dimming controls and occupancy sensors give users control of lighting. Each façade of the building is designed in a way that responds to its solar orientation. The facility also includes an atrium to provide natural lighting to the interior of the facility.

Adjustable floor diffusers in the raised access floor give users control of the mechanical air distribution in their work environments. These features significantly reduce energy costs and water usage.

Sustainable building materials are used throughout the facility and 77.5 percent of the construction waste was diverted from disposal. All adhesives, sealants, paints and coatings were selected for low VOC content and selected carpets were certified Green Label Plus. 93 percent of all new wood used in the project was sustainably harvested.

The site is located only a10 minute walk from a metro station and two miles from the University of Maryland campus to help create synergy between the University community and NOAA researchers (regular shuttle bus service is provided).

This building's design promotes innovation and employee effectiveness by providing many pleasant interior and exterior locations where scientists and researchers may work, meet, interact and exchange ideas and thereby accelerate the development of new methods and technologies to advance the fields of weather forecasting and climate prediction. and occupancy sensors give users control of lighting. Each façade of the building is designed in a way that responds to its solar orientation. The facility also includes an atrium to provide natural lighting to the interior of the facility. Adjustable floor diffusers in the raised access floor give users control of the mechanical air distribution in their work environments.

Best Adopted Practices

Achievements related to recognizing Federal agencies that have seized the opportunity and advantage to adopt and implement initiatives, innovations and projects in the categories of Asset Management, Sustainability or Workplace Innovation previously submitted to the GSA Achievement Award for Real Property Innovation.

Winner

Department of the Interior

U.S. Geological Survey – Real Property Process Improvements

The U.S. Geological Survey (USGS) has been aggressively pursuing the improvement of real property metrics with the goal of reducing overall facilities costs. A number of innovative processes have been developed to lower operational workload while improving program results.

The USGS developed several tools to monitor the Bureau footprint, scrutinize space actions, promote the consolidation of space, and evaluate the financial merit of cost-saving and footprint-reducing projects. These tools not only help manage footprint changes but also allow for more informed decision-making regarding facilities investments and space actions. A centralized space approval process for all proposed commitments for space was established. The process defines the approvals that are required for any space action, based

on performance metrics of the action. A custom SharePoint form was developed that automatically routes space actions to the appropriate levels for approval, based on data provided in the form. This process ensures all space actions are verified at the appropriate levels in the organization and are reviewed for savings opportunities and compliance with policy prior to committing to the space.

As part of the centralized space approval process, each space action is evaluated for potential collocation opportunities with other USGS science centers as well as with other Department of the Interior facilities. The USGS built a geospatial application that graphically identifies any Interior location within 50 miles of the potential new space. The tool provides key information for each potential collocation; including address, size, and contact information, to further refine the potential collocation opportunity.

In addition to the centralized space approval process, an automated project ranking and tracking system was developed that analyzes these and other space reduction proposals based on the financial merit of each project. This process ensures that the small amount of funding available is allocated to projects with the greatest potential, in an efficient manner. Additionally, projects are more likely to succeed due to the simplification and standardization of the project tracking process.

The use of these tools has allowed the USGS to focus on implementing projects that provide a significant rent savings throughout the portfolio. From fiscal year 2011 through 2017, the USGS anticipates a footprint reduction of over 700,000 rentable square feet (rsf). This represents a footprint reduction of over 12 percent of the USGS holdings and translates to an estimated cost savings and cost avoidance of over $15 million annually.

Best Adopted Practices
Recognized Entries

Honorable Mention

General Services Administration, Public Buildings Service

NGAP: Leadership through Continuous Innovations in Procurement

While the ascendance of natural gas in the energy-independence ambitions of the U.S. is well documented, how to procure it as an end-use commodity is not. The GSA Energy Division's Natural Gas Acquisition Program (NGAP) has quietly led a revolution in natural gas procurement, overturning static, paper-based processes in favor of dynamic, electronic ones. By delivering a reliable, competitive, transparent and, ultimately, highly cost-effective approach to procuring natural gas – the cleanest burning fossil fuel –NGAP highlights how innovation and leadership can transform energy acquisition practices to deliver major cost savings to a wide swath of federal agencies. By continuing to refine the best practices in procurement it established over a decade ago, NGAP delivered $32 million in savings to fourteen Federal agencies during FY12.

Of equal importance to the cost savings generated, the NGAP staff has continued to strengthen relationships with acquisition professionals within the agencies that rely on this program. Two national level examples include the Bureau of Prison's Field Acquisition Office and Veterans Administration's National Energy Business Center. NGAP staff work directly with acquisitions and operations professionals at the agency and facility levels to discuss contracting best practices, bid specifications and changes in regional and utility level natural gas markets. By actively working with other acquisition professionals to share knowledge, these agencies are better able to utilize the tools, policies and strategies required to purchase natural gas effectively.

Since 2002, NGAP has helped Federal Agencies, including the Environmental Protection Agency, National Aeronautics and Space Administration, Federal Deposit Insurance

Corporation, Veterans Administration and Bureau of Prisons purchase over $1 billion in natural gas supply contracts. NGAP has grown by 40% over the past three years representing $30.5 million in annual energy spend. A clear example of how widely NGAP's best practices have been adopted is that a full two-thirds of this growth has come from agencies outside of GSA. In addition, seven states and multiple local governments now employ energy procurement programs modeled after NGAP to purchase energy at the lowest cost available in the market.

Special Achievement

Department of State

U.S. Embassy in Athens, Greece: "A Stay-in-Place" Solution that Preserved a Historic Embassy and Saved Millions of Dollars

The U.S. Embassy building in Athens, Greece was designed by famed architect Walter Gropius. The modernist structure was inspired by the Parthenon and is located on a main boulevard in the center of Athens. It is one of only 25 buildings worldwide designated on the U.S. Secretary of State's Register of Culturally Significant Properties.

By 2007, the Embassy required a full-scale renovation. However, because of the building's unique structure and location on the site, it would not be possible to meet 100% of our current standards for new facilities. This framed a difficult decision – whether to try to retain this historic landmark or construct a new embassy in a different location.

This decision was challenging for the U.S. Department of State's Bureau of Overseas Buildings Operations (OBO), which manages the real property for 275 embassies and consulates in 190 countries. OBO has an award-winning new embassy construction program that has completed over 100 facilities in the last decade. While this new construction program has been very successful, OBO quickly realized that it would not work for its legacy embassies that are irreplaceable for cultural, symbolic, and policy reasons. This led to the development of the New Embassy Compound Alternatives (NEC Alternatives) initiative. The goal was to determine the best long-term path (renovate vs. new vs. lease) for the Department's key facilities. In 2012, after a thorough analysis, the Department approved a stay-in-place solution for the Embassy in Athens that (1) preserved an historic building, (2) saved millions of dollars, and (3) spurred similar analysis across its global real estate portfolio.

The NEC Alternatives analysis for the U.S. Embassy in Athens is an excellence example of Best Adopted Practices and builds on several asset management concepts (e.g., renovation of historic facilities, business case analysis, and master plans) outlined in prior submissions for this award. Our approach was also innovative in several ways:

1. ***Used Creative Strategies to Preserve a Historic Embassy:*** Used creative approaches to preserve a building on the Secretary of State's list of culturally significant facilities
2. ***Moved from Prescriptive Standards to Customized Solutions***: Moved from having to meet 100% of our standards to a more realistic approach for select legacy posts
3. ***Elevated Sustainability***: Elevated sustainability considerations to an asset management level (reuse vs. new) in addition to a building systems level
4. ***Established a Comprehensive Decision Framework:*** Developed a three-factor decision framework (i.e., operations, cost, and security) for these high-profile decisions
5. ***Scaled up Business Case to Entire Program***: By applying this business case analysis across the portfolio, OBO strengthened its programs and is ensuring the right long-term decisions

The Athens stay-in-place solution was also a financial success. OBO will save an estimated $200+ million versus the cost of constructing a new embassy.

OBO is already replicating the NEC Alternatives analysis and plans to apply it to over 40 projects representing $2 billion in work over the next decade. This includes diplomatic facilities in Paris, Amman, Mostar, Copenhagen, Stockholm, Banja Luka, Montevideo, and Manila.

Department of State

Department of State Reduced Reliance on Private Leases

In June 2011, the Department of State (State) was presented with a relatively unique opportunity: the owner of one of its key real estate assets, a fully secured warehouse, was interested in selling the property. State had the chance to save millions of dollars and transfer ownership and full control of a high-priority, high-security asset to federal, rather than private, hands. The only complication was that the owner had a time limit. The entire $10 million purchase had to be completed, start to finish, in six months.

State had been looking for opportunities to increase its occupancy of federally owned buildings and reducing its reliance on private leases. Repeated studies and evaluations had shown this to be the more fiscally responsible option, but opportunities were scarce. However, beginning in 2011; State, with GSA, has been able to acquire two commercial properties, one federal property, and renovate another federal building. These projects combined have resulted in State's domestic real estate portfolio now having a greater than 50 percent occupancy of Federal space versus commercial leases. These acquisitions are resulting in the cost avoidance of millions of taxpayer dollars, increasing the safety and security of employees, and keeping State, with the able assistance of GSA, at the forefront of federal real estate asset management activities.

The property offered to State for sale in June 2011 was a building with a long and complex history. State has housed its Diplomatic Pouch and Mail transshipment facility at this warehouse in Sterling, Virginia since 1989. The asset supports the conduct of US foreign policy activities worldwide and is critical to State's mission performance and the success of over 25, 000 non-State customers from more than two dozen other federal Departments and Agencies.

In November 2001 anthrax contamination was confirmed by the Centers for Disease Control and Prevention (CDC). State worked closely with the CDC, the Federal Bureau of Investigation, and the United States Postal Service to examine all of the mail in the building and to ensure the safety of its staff. Subsequently State invested approximately $20M to replace the building's heating, ventilation and mechanical systems and install highly specialized security screening and testing equipment in this facility for the detection of explosive, chemical, biological and other hazards.

Because of State's long term need for this facility, as well as the extensive improvements to the equipment and the building itself, it was apparent to State and GSA that purchase was in the long term best interests of the taxpayer. Furthermore, when the opportunity to purchase arose, the government lease still had nine years remaining, at an average annual rent of approximately $1M. Thus the break-even point of this purchase was fewer than ten years. Extensive coordination and cooperation between State, GSA, the Congressional appropriations committees, and the Department of Justice was necessary to facilitate a purchase with so little time. This success and the money saved have demonstrated the effectiveness of converting commercial leases to federally-owned buildings and begun the restructuring of State's portfolio and its efforts to reduce its reliance on costly private leases.

General Services Administration, Public Buildings Service

Chiller Plant Optimization

The HOTD Chiller Plant Optimization Project involves implementation of an automated system of operating plant chillers and their associated supporting equipment based on customers' energy demands. The system evaluates customer demand, determines the most efficient grouping of chillers and associated equipment to operate based on those demands, and makes recommendations to the equipment operators whenever energy manipulations are required.

The HOTD plant has a grouping of eight chillers from among which operators may choose the appropriate one to meet specific energy demands. The new automated system being implemented applies multiple optimization concepts: evaluating efficiency of individual chillers, pump sets, and cooling towers; evaluating overall demands of total energy

required for plant operation; and matching these criteria to current demand at any period of time. The system thereby provides significant cost saving opportunities, as well as ability to minimize fluctuations in operations associated with starts and stops of the equipment.

HOTD team members have traditionally been operating the chiller plant by starting and stopping equipment based on customer demand. The plant operators have matched required equipment based on which chillers are available, anticipated weather conditions, and/or energy flow related to time of day, doing so via manual starts and stops of the plant equipment.

Operating the chillers also involves the starting and stopping of ancillary equipment such as chilled water pumps, condenser water pumps, and cooling towers. The determination of which chiller or pump/tower combination to start was not always based on the most efficient method, but rather based on anticipation of meeting energy demands. The fundamental drawback to this approach was that there were periods when chillers may have been started too early or left on longer than necessary. The Optimization Control System has been designed to evaluate the existing plant chilled water load and, based on historical energy flow associated with equipment necessary to meet that load, determine the best combination of equipment necessary to achieve the demand and automatically start the equipment. In intervals where automatic operation is not in best interest during maintenance, the operators are able to maintain control yet still be guided by the control system regarding the most efficient use of HOTD plant equipment. Integrating of these Optimization Control System improvements into the existing chiller plant control system generates the potential for substantial energy savings, so that this well-operated chilled water production facility will be able to produce chilled water at an energy consumption rate equal to or less than 0.9 kilowatt per ton.

A review of operational practices at HOTD suggested that energy consumption has exceeded 1.1kW per ton. HOTD data indicates that the facility produces about 32,000,000 ton-hours annually at an average energy cost of $0.13 per kilowatt hour (kWh). Therefore, the implementation of automated control optimization achieving an energy consumption rate of 0.9kW per ton produces savings of 0.2 kW per ton, and an annual energy cost reduction of $832,000.

HOTD provides steam heating and chilled water cooling to approximately 80 federal and quasi-federal buildings in the heart of Washington, DC, totaling approximately 70 million square feet of space, and also provides chilled water for cooling to eleven of these buildings located on and adjacent to the National Mall. While providing these services, HOTD operates efficiently, and its team members are always working toward minimizing the use of energy resources for maximum results.

General Services Administration,
Public Buildings Service

VA's Strategic Capital Investment Process

As the largest civilian agency, the Department of Veterans Affairs (VA) is responsible for an annual (FY 2013) budget of $140.3 billion focused on fulfilling the promise made by President Lincoln to care for our nation's Veterans and their families.

To accomplish this important mission, VA employs over 300,000 employees representing more than 300 job series in diverse and complex delivery systems of health care, benefits, burial and memorial, and support services.

VA operates one of the largest capital portfolios in the nation with over 5,800 facilities and 172 million square feet of space located throughout the United States and its territories. This inventory includes buildings that are on average more than 50-years old. Approximately one-third of VA's owned space is considered historic with many in need of repair. Additionally, VA's hospital-based infrastructure must continue its transformation into a 21st-century healthcare system.

Faced with these infrastructure challenges, a climate of severe fiscal restraints and competing requirements, VA recognized the imperative to calibrate its capital asset planning, investment and management policies and practices. Calibrations needed to produce a transparent, data-driven, defensible plan that would identify and close gaps between current conditions and Department-wide performance standards. For VA, gap analysis focused on: access, utilization, space, facility condition, energy, safety, security, parking, privacy, and IT deficiencies. New and innovative approaches needed to be integrated into the process.

With the formulation of its FY 2012 capital budget, VA launched an ambitious major initiative: the Strategic Capital Investment Planning (SCIP) process to transform its business model for planning, investment decisions, and asset management for the entire enterprise.

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